

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/19773

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H01L 21/46, 21/301, 21/78, 21/762
US CL : 438/462; 460, 108, 124, 401, 622, 692, 975

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 438/462; 460, 108, 124, 401, 622, 692, 975

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
East USPAT

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,923,996 A (SHIH et al) 13 July 1999 (13.07.1999), see entire document.	1-13
A	X 5,933,744 A (CHEN et al), 3 August 1999 (03.08.1999), see entire document.	1-13
A	US 5,899,738 A (WU et al) 04 May 1999 (04.05.1999), see entire document.	1-13
A	US 6,232,200 B1 (CHU) 15 May 2001 (15.05.2001), see entire document.	1-13
A	US 6,080,636 A (TSENG) 27 June 2000 (27.06.2001), see entire document.	1-13
A	US 6,271,602 B1 (ACKMANN et al) 07 August 2001 (07.08.2001), see entire document.	1-13
A	US 6,307,273 B1 (CHIEN et al) 23 October 2001 (23.10.2001), see entire document.	1-13
A	US 6,528,386 B1 (SUMMERFELT et al) 04 March 2003 (04.03.2003), see entire document.	1-13
A	US 6,534,378 B1 (RAMKUMAR et al) 18 March 2001 (18.03.2003), see entire document.	1-13



Further documents are listed in the continuation of Box C.



See patent family annex.

Special categories of cited documents:	
* "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
* "E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
* "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
* "O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
* "P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

12 November 2003 (12.11.2003)

Date of mailing of the international search report

03 MAR 2004

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INTERNATIONAL SEARCH REPORT

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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,562,710 B2 (NAKAGAWA et al), 13 May 2003 (13.05.2003), see entire document.	1-13
A	US 6,562,691 B2 (CHANG et al) 13 May 2003 (13.05.2003), see entire document.	1-13
Y,E	US 6,599,809 B2 (ANMA et al) 29 July 2003 (29.07.2003), whole document.	1-13.